

Environmental  
Restoration  
Contractor

# **ERC Team**

## **Meeting Minutes**

062177

Job No. 22192  
Written Response Required: NO  
Due Date: N/A  
Actionee: N/A

Closes CCN: N/A  
OU: N/A  
TSD: N/A  
ERA: N/A  
Subject Code: 4170, 8420

**SUBJECT** HANFORD SITE GROUND WELL DRILLING AND DECOMMISSIONING  
ACTIVITIES

**TO** Distribution

**FROM** John Auten

**DATE** September 22, 1998

### **ATTENDEES**

John Auten H9-03  
Stan Leja B5-18

### **DISTRIBUTION**

Attendees  
Karl Fecht H0-02  
George Henckel H0-19  
Jared Isaacs H0-19  
Joe Jimenez X5-50  
Barry Vedder H0-02  
Joan Woolard H0-02  
Document and Information Services H0-09

A meeting on the above subject was held on August 20, 1998 to discuss several topics related to the groundwater well drilling program at the Hanford Site, Richland Washington. The agenda for the meeting is provided as attachment 1. Several of the items discussed included proposed alternatives to requirements identified in WAC 173-160. Ecology concurrence with ERC proposed actions and alternatives are contained in the attachment summaries as identified below.

- Attachment 2, General Well Seal Design (WAC 173-160-450)
- Attachment 3, Decontamination Procedures re:subcontractor (WAC 173-160-440)
- Attachment 4, Well Tagging Requirements (WAC 173-160-311 and WAC 173-160-420)
- Attachment 5, 20 ft. Seal (revisited) (WAC 173-160 Figure 1)
- Attachment 6, Strategy for Dispositioning of Abandoned or Nonlocatable Wells.

Attached to these meeting minutes is Attachment 7, documentation of the telephone conversation between John Auten and Stan Leja concerning the minimum screen length.

2mm8-20.doc

**Bechtel Hanford, Inc. – CH2M Hill Hanford, Inc. – Thermo Hanford, Inc.**

062177

**Attachment 1**  
**Meeting Agenda**

062177

Date: 8/20/98

Meeting Attendees:

John Auten, ERC Well Administration Office  
Stan Leja, Washington State Dept. of Ecology

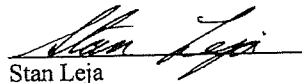
Meeting Agenda:

The purpose of this meeting is to clean up several items that are currently outstanding between the Washington State Dept. of Ecology (WDOE) and the ERC Well Administration Office. These items support current and future well drilling, decommissioning, and abandonment activities on the Hanford Site. Other items to be addressed are administrative WAC 173-160 requirements that have direct affects on well records and well tracking.

Item:

1. General Well Seal Designs
2. Decontamination Procedures re: subcontractor
3. Well Tagging Requirements
4. 20 ft. Seal (revisited)
5. Strategy for Dispositioning of Abandoned or Nonlocatable Wells.

The discussion and ERC Well Administration Office position for each of these items has been provided as individual attachments to this agenda.



Stan Leja  
Washington State Department of Ecology



John E. Auten  
ERC Well Administration Office

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062177

**Attachment 2**

**General Well Seal Design**

062177

Date: 8/20/98

Meeting Attendees:

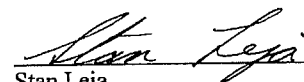
John Auten, ERC Well Administration Office

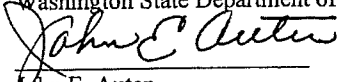
Stan Leja, Washington State Dept. of Ecology

Subject: General Well Seal Design for Performance Enhancement and Well Longevity

We (ERC) have recently had your concurrence to construct multi or potentially multiple use wells; i.e., extraction, injection, monitoring, etc, with a 5 to 10 ft. cement plug directly above the filter pack to isolate any potential for bentonite or bentonite products from entering the screen interval. Thus eliminating bentonite contaminated samples. This design also enables us to perform a variety of remediation activities on problem wells and/or deepening wells that have gone dry while minimize replacement cost. Had this design been utilized extensively in the past we could have cost saving options for the RCRA wells requiring replacement.

With your (WDOE) concurrence we will initiate this design across the board where it is viable and prudent.

  
Stan Leja  
Washington State Department of Ecology

  
John E. Auten  
ERC Well Administration Office

062177

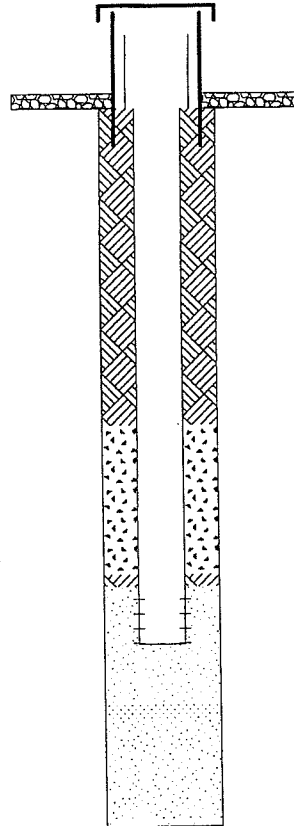
## WELL CONSTRUCTION AND COMPLETION SUMMARY

Drilling Method:	Sample Method:	Grab/Spill Spoon	WELL NUMBER:	xxx-xx-xx	xxxx-x	TEMPORARY WELL NO:	none
Drilling Fluid Used:	Additives Used:	None	Coordinates: N	Not documented			
Driller's Name:	WA State Lic Nr:	xxx	Coordinates: E	Not documented			
Drilling Company:	Company Location:	xxxx	Start Card #:	NA			
Date Started:	Date Completed:	x/x/xx	Elevation Ground Surface:	734.7 m Brass Marker			

Depth to Water: 332.5 ft 23Apr98  
(Ground surface)

## GENERALIZED STRATIGRAPHY Geologist's Log

- 0 - 3 ft : Fine to very fine, 60-80% felsic, subrud to sub angular mod w sorte, unconsolidated
- 3 - 247 ft : Hanford:  
Sand normally graded sandy beds, varying from granular, occasionally pebbly, to very fine silty beds, 40-70% felsic, 60-30% mafic, pred. sub angular to sub rounded, occasional paleosol horizon w/slight to strong HCl reax., occasional pebble-cobble gravel stringer/zone. Inner bedded Hanford sands, silty sands, and occ. gravelly stringers
- 212 - 216 ft : Pebble-cobble sandy gravel, 60-50% mafic 50-40% felsic. Small pebbles to large cobbles, w/granular to med. sand matrix
- 220 - 230 ft : Small pebbles to large cobbles, w/granular to med. sand matrix
- 247 - 323 ft : Hanford gravel: Pebble-cobble gravel 70+% mafic, 30% felsic, sub to well rounded open framework, some med. gravel, large cobbles 4-8" dia. common
- 323 - 376 ft : Top of Ringold 'E' - Sandy gravel, 60-70% felsic, 30-40% mafic, subrounded to rounded pebble-cobble gravel, w/pred. felsic sand matrix, sl cemented, pebble-cobbles 2-6" dia.
- 376 - 438 ft : Ringold "Lower Mud"  
376-381 yellow very sandy silt  
381-412 Blue gray very clayey silt. Silty to mod. silty clay rich organic - wood debris - fragments common.  
412-436 Dark to med. brown - brown gray, silty to mod. silty clay rich organic - wood debris fragments common.
- 438 - 481.7 ft : Ringold 'A':  
Pebble-cobble gravel mod. sandy, gravel 40-70% felsic, salt and pepper sand, light to dark green chlorite stains on sand, mod.-well cemented in part.



480.7 ft : Borehole drilled depth

0 - 480.7 ft : 9.6-in. AP-1000 (Becker Hammer rig) w/9" x 6" dual wall drive pipe, 9-5/8" shoe, & 2000 cfm air available

Elevation of Reference Point: m  
Height of Reference Point Above Ground Surface: m  
Depth of Surface Seal: 10 ft.  
Type of Surface Seal: 4x4 Concrete Pad

Fill	Casing	Screen
0 - 211.7 ft : 9.6-inch hole CEMENT	0 - 328.2 ft : 4 inch 4" SS sch. 5 well casing	
211.7 - 311.7 ft : 9.6-inch hole Crumles		
311.7 - 319.95 ft : 9.6-inch hole Cement or Cement Grout		328.2 - 358.03 ft : 4 inch 4" SS wire warp .020 slot
319.95 - 358.53 ft : 9.6-inch hole SILICA SAND	358.03 - 358.53 ft : 4 inch 4" SS cap	
358.53 - 397 ft : 9.6-inch hole SILICA SAND		
397 - 409.1 ft : 9.6-inch hole BENTONITE HOLE PLUG		
409.1 - 480.7 ft : 9.6-inch hole SILICA SAND		

SAMPLE AS-BUILT DWG.  
SHOWING SEAL & PLUG

Drawing By: JEA  
Reference: Hanford Wells  
Revision: 0  
Revision Date: 20Aug98  
Print Date: 20Aug98

Report Form: WELLS Project File: WELLS.GPJ



### **Attachment 3**

#### **Decontamination Procedures**

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Date: 8/20/98

Meeting Attendees:

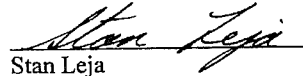
John Auten, ERC Well Administration Office  
Stan Leja, Washington State Dept. of Ecology

Subject: Decontamination Procedures per WAC 173-160-440

In order to meet the new WAC requirements we, ERC, must submit for approval our equipment decontamination procedure (drilling equipment utilized in radioactive areas) to WDOE for approval. The decontamination procedure that cover that aspect of our work is BHI-EE-01, Environmental Investigations Procedures, "Field Cleaning and/or Decontamination of Drilling Equipment". There may be cases where work; e.g., field well maintenance or well decommissioning activities, are performed by subcontractors working under their decontamination procedures, in those cases ERC contracts specify that we (ERC) review and approve all such procedures prior to any field activities. Our review process insures that the subcontractor's procedures are complete and meet (as a minimum) the ERC procedures. In those cases where a subcontractor is working under his procedure, we are asking that the WDOE approval process for those procedures be waved. We (ERC) feel that our internal requirements, review process, and your (WDOE) approval of our procedure meets and/or exceed the WAC requirements.

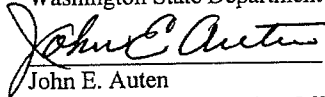
While you (WDOE) have approved (7/30/98) our current decontamination procedure ("Field Cleaning and/or Decontamination of Drilling Equipment" Rev. 1) this is a living document and may be revised from time to time. The ERC will continue to obtain your approval of any changes to this document as required by the WAC. However, as a matter of convenience and to keep WDOE informed, we intend to add your name to our distribution list and you can always find copies of our procedures on the ERC "Netscape" Home Page.

With your concurrence we will proceed under these guidelines.



Stan Leja

Washington State Department of Ecology



John E. Auten

ERC Well Administration Office



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**BHI-EE-01, Environmental  
Investigations Procedures**

Procedure No.6.2

Rev.1\*

Effective Date 09/30/96

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**Field Cleaning and/or Decontamination  
of Drilling Equipment**

*Approved to meet  
WAC 173-160-440  
Alan Lepi 7/30/98*  
Point of Contact: W. S. Thompson

Approved By:

/s/ W. L. Pamplin, Jr.  
W. L. Pamplin, Jr., Manager  
Environmental Technologies

**1.0 PURPOSE AND SCOPE**

This procedure establishes the methods for cleaning and/or decontaminating tools and equipment used in site characterization and monitoring activities.

This procedure applies to personnel performing cleaning/decontamination activities in support of drilling, soil sampling, and well maintenance activities.

**2.0 REQUIREMENTS**

**2.1 Cleaning Requirements**

1. Cleaning shall comply with WAC-173-160-530, *Minimum Standards for Construction and Maintenance of Wells*. This requires that the drill rig and all downhole equipment used when drilling in known contamination or potentially contaminated sites be steamed cleaned before and after each use.
2. The drill rig and all downhole equipment shall be steam cleaned prior to mobilization to any site. Previously cleaned drilling equipment normally does not require re-cleaning prior to use.
3. Steam cleaning of the drill rig is not required when more than a single borehole is drilled at the same hazardous waste site (e.g., crib, trench, pond, and/or landfill). However, all downhole equipment shall be decontaminated in accordance with Section 2.2 between boreholes on the same hazardous waste site.
4. Rinsate generated during steam cleaning is exempt from collection if generated outside the boundaries of a known waste site and if the equipment being cleaned was not associated with soils/drill cuttings collected as suspected hazardous or radioactive.

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\*Changes are indicated by revision bars shown in the margins.

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**BHI-EE-01, Environmental  
Investigations Procedures**

Procedure No.6.2

Rev.1\*

Effective Date 09/30/96

**Field Cleaning and/or Decontamination  
of Drilling Equipment**

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Page 2 of 6

5. Rinsate from steam cleaning of regulated equipment will be collected until released by Health Physics.
6. Cleaning shall include the removal of all marking compounds and coatings from downhole equipment, permanent casing, and the inside of temporary casing.

**2.2 Decontamination Requirements**

Decontaminating the drill rig and drilling equipment is required if operating inside a known waste site or if the equipment being cleaned was associated with soils/drill cuttings collected as suspected hazardous or radioactive. Field decontamination activities are described below.

1. Radiological decontamination consists of hand wiping/washing or "KELLY" decontamination methods. NO steam cleaning or pressure washing methods are permitted without prior approval from BHI Health Physics.
  2. Nonradiological decontamination may consist of scrubbing, wiping, flushing, rinsing, and steam cleaning.
  3. Steam cleaning/pressure washing can be done on chemically and fixed radiological contaminated equipment when a method is available to collect rinsate.
  4. Sampling equipment used to obtain physical or chemical samples shall be decontaminated in accordance with this procedure before it is transported to the 1706 KE decontamination facility for decontamination in accordance with EII 5.5 of WHC-CM-7-7, *Environmental Investigations and Site Characterization Manual*. Equipment that is not successfully decontaminated (radiologically) will not be transported to the facility and must be stored in accordance with applicable radioactive material and equipment procedures.
  5. All water used for decontamination activities shall be potable (e.g., Hanford system or City of Richland water) or Columbia River raw water drawn from Hanford Site raw water supply points.
  6. All decontaminated materials and equipment shall be stored in a manner to minimize the possibility of recontamination.
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**BHI-EE-01, Environmental  
Investigations Procedures****Procedure No.6.2****Rev.1\*****Effective Date 09/30/96****Page 3 of 6****Field Cleaning and/or Decontamination  
of Drilling Equipment**

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7. Decontamination fluids shall be managed in accordance with BHI-FS-01,  
*Field Support Administration.*

**2.2.1 Decontamination Fluids**

When it cannot be treated and released immediately, decontamination wash and rinse fluids shall be collected and contained in impoundment reservoirs consisting of one or more of the following:

1. Plastic sheeting. Used in the field when decontaminating drill rigs or other large pieces of equipment. A plastic sheeting barrier must be set up to collect fluids if this method is used.
2. Wash basins. Tanks or other fluid containment vessels used in hand washing, rinsing/flushing, and scrubbing/brushing methods in the field.
3. Fluid collection sumps. Usually associated with wash pads at a specialty facility where equipment would be transported for steam cleaning and/or pressure washing operations.

**3.0 EQUIPMENT**

1. Approved cleaners (e.g., Simple Green, Smearaway)
2. Steam cleaner/pressure washer (water temperature 180 °F)
3. Containment: tanks/impoundments/plastic sheeting
4. Brushes
5. Paper or cloth wiping towels
6. Raw or Richland city water
7. Water tanks
8. Metal file
9. Sandpaper
10. Pumps.

**4.0 PROCEDURE**

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Investigations Procedures****Procedure No.6.2****Rev.1\*****Effective Date 09/30/96****Page 4 of 6**

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**Field Cleaning and/or Decontamination  
of Drilling Equipment**

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**4.1 Radiological Decontamination**

Survey and unconditional radiological release are the criteria for successful radiological decontamination.

1. If unable to eliminate fixed contamination, the FC will decide whether to control the equipment as radioactive material or dispose of it as radioactive waste.
2. Before it is taken from the site, equipment designated for disposal shall be decontaminated to remove nonradiological hazards.

**4.1.1 Radiological decontamination methods**

The following methods may be used to perform radiological decontamination.

1. Wiping. This method consists of wiping the contaminated equipment with clean paper towels and/or clean rags. It is often performed to prevent the spread of radioactive contaminants as the equipment (drill string, sampler, casing, or drill line) is being removed from the borehole. When all smearable radiological contamination has been removed, the equipment will be cleaned or decontaminated to remove chemical contaminants as required before it is reused or transported to another site.
2. Abrasive Method. This method is used in the field to remove fixed radioactive contamination after all smearable radioactive contamination has been eliminated. The abrasive cleaning method is used to remove small isolated areas of fixed radioactive contamination on equipment. It consists of scrubbing the contaminated area with a wire brush, sandpaper, or other mechanical means using an approved cleaner or removing a thin layer of metal using a metal file, and sandpaper (garnet, silicon dioxide grit). The equipment will be cleaned or decontaminated to remove chemical contaminants as required before it is reused or transported off site.

**4.2 Nonradiological Decontamination**

Nonradiological field decontamination is accomplished by using one or more of the following techniques and occurs if the Radiological Control Technician (RCT) has determined that smearable radiological contaminants are not present.

The criteria for nonradiological field decontamination is successful completion of

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**BHI-EE-01, Environmental  
Investigations Procedures****Procedure No.6.2****Rev.1\*****Effective Date 09/30/96****Page 5 of 6****Field Cleaning and/or Decontamination  
of Drilling Equipment**

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one or more of the following methods with no visible residues remaining.

1. Steam Cleaning/Pressure Washing Decontamination. All exposed surfaces of the equipment are steam cleaned or pressure washed with an approved cleaner, such as Built Laundry Detergent or Simple Green. The equipment is then rinsed with water.
2. Wash Basin Decontamination. Decontamination activities using tanks or other fluid containment vessels shall be done so that all contaminated dirt or potentially contaminated rinsate is collected. The equipment can be brushed, wiped, or swabbed using an approved cleaner, such as Built Laundry Detergent or Simple Green. The equipment is then rinsed with water.
3. Rinsing/Flushing Decontamination. Pumps used for well development are decontaminated by flushing water through the pump assembly. Connect the pump to the discharge tubing, submerge the pump in potable water or Columbia River raw water, energize the pump, and run approximately 30 gallons through the pump and tubing. The water flushed through the pump shall be contained and handled in the same manner as well development waste water as specified in 1.11 of this manual.
4. Wiping. This method consists of wiping the contaminated equipment with clean paper towels, or clean rags, using approved cleaners, such as Built Laundry Detergent or Simple Green. It is often performed to prevent the spread of contamination as the equipment (drill string, sampler, casing, drill line, etc.) is being removed from the borehole.

**5.0 REFERENCES**

BHI-FS-01, *Field Support Administration*, Bechtel Hanford, Inc., Richland, Washington.

BHI-EE-01, *Environmental Investigations Procedures*, Procedure 1.11, "Purgewater Management," Bechtel Hanford, Inc., Richland, Washington.

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**BHI-EE-01, Environmental  
Investigations Procedures**

Procedure No.6.2

Rev.1\*

Effective Date 09/30/96

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**Field Cleaning and/or Decontamination  
of Drilling Equipment**

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WAC-173-160-530, "Minimum Standards for Construction and Maintenance of Wells," *Washington Administrative Code*, as amended.

WHC-CM-7-7, March 15, 1993, *Environmental Investigations and Site Characterization Manual*, EII 5.5, Westinghouse Hanford Company, Richland, Washington.

**6.0 FORMS (See Forms Section)**

Form BHI-EE-035, "Field Cleaning and/or Decontamination"

**7.0 ATTACHMENTS**

None.

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**Attachment 4**

**Well Tagging Requirements**

Date: 8/20/98

Meeting Attendees:

John Auten, ERC Well Administration Office

Stan Leja, Washington State Dept. of Ecology

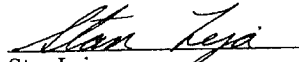
Subject: Well tagging requirements per WAC 173-160-311

AND WAC 173-160-420 *SL 9/22/98*

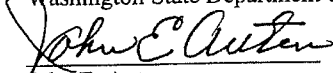
The new WAC 173-160-311 requires that all wells be tagged with a unique well identification number and that the tag is to be supplied by the state. We have been down this road in the past but unfortunately we are not able to provide the documented evidence of our agreements with WDOE. However, we the ERC and the Hanford Site for that matter have for several years now been tagging each well with a unique bar code and number. That number is and has been transmitted to the state via the Start Card and Well Report for each new well, decommissioned well, and/or remediated well on the site. In addition, the bar code supports ongoing groundwater activities and the number is a vital part of the Hanford Well Information System database.

With your (WDOE) concurrence we will continue with our current numbering and tagging system rather than change to WDOE's system.

As a reminder the Hanford Well Information System database will soon be available on the ERC Home Page.

  
Stan Leja

Washington State Department of Ecology

  
John E. Auten

ERC Well Administration Office



**Attachment 5**

**20 foot Well Seals Revisited**

Date: 8/20/98

Meeting Attendees:

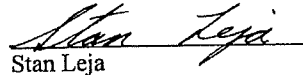
John Auten, ERC Well Administration Office

Stan Leja, Washington State Dept. of Ecology

Subject: 20 foot well seals revisited

Several years ago we requested and received a variance from WDOE to change and to standardizes the well sealing requirement from a minimum 18 ft. seal to minimum 10 ft. cement grout seal (WAC 173-160 Fig. 1). We are continuing to incorporate this change in our well designs, however I no longer have a copy of the original variance. Rather than dig through our paper work system we (ERC) would appreciate it if you would provide us with a new concurrence.

With your (WDOE) concurrence we will continue with the practice of placing a 10 ft. seal in all Hanford Site groundwater monitoring wells drilled or designed under the direction of the ERC.



Stan Leja

Washington State Department of Ecology



John E. Auten

ERC Well Administration Office

**Attachment 6**

**Technical Strategy for Dispositioning  
Of Abandoned or Nonlocatable Wells**

Date: 8/20/98

Meeting Attendees:

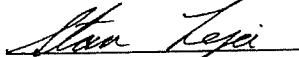
John Auten, ERC Well Administration Office

Stan Leja, Washington State Dept. of Ecology

Subject: Technical Strategy For Dispositioning Abandoned or Nonlocatable Well on the Hanford Site

We have prepared the aforementioned outline based our discussions of 1997, a copy of which was forwarded to you in April of this year. With your (WDOE) concurrence it is our intention to initiate work, utilizing this document (057476) as a guide to reduce the Hanford Site well inventory.

Initially work is planned to start with the easier Category 1 wells followed by Category 2 wells. There are no activities planned for the Category 3 wells at this time, as we have not yet developed a detailed plan for this work. Please be assured that when the proper time comes, we will work closely with you (WDOE) to finalize the Category 3 plan.

  
Stan Leja

Washington State Department of Ecology

  
John E. Auten

ERC Well Administration Office



057476

Job No. 22192  
Written Response Required: NO  
Due Date: N/A  
Actionee: N/A  
Closes CCN: N/A  
OL: N/A  
TSD: N/A  
ERA: N/A  
Subject Code: 8960, 8400

APR 01 1998  
U.S. Department of Energy  
Richland Operations Office  
M. J. Furman, Project Manager  
Groundwater Project  
P.O. Box 550, MSIN H0-12  
Richland, Washington 99352

RECEIVED  
APR 01 1998  
DOE-RL/DIS

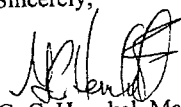
Subject: Contract No. DE-AC06-93RL12367  
**TECHNICAL STRATEGY FOR DISPOSITIONING ABANDONED OR  
NONLOCATABLE WELLS**

Dear Mr. Furman:

Attached please find the "Technical Strategy for Dispositioning Abandoned or Nonlocatable Wells." Within the Hanford well inventory, there are approximately 640 wells which, for various reasons, do not physically exist or cannot be located. This strategy has been developed to identify a process to demonstrate that a reasonable, documented procedure has been followed to disposition these wells.

If you have any questions, please contact Ms. J. V. Borghese at (509) 372-9442.

Sincerely,

  
G. C. Henckel, Manager  
Groundwater Project

JVB:jam

Attachment: Technical Strategy of Dispositioning Abandoned or Nonlocatable Wells

cc: K. M. Thompson (RL) H0-12, w/a

BECHTEL HANFORD, INC.

3350 George Washington Way  
Richland, WA 99352

tel (509) 375-4640  
fax (509) 375-4644

057476

Mr. M. J. Furman

Page 2

**APR 01 1998**

bcc:

J. E. Auten H9-03, w/a  
B. H. Ford H0-21, w/a  
G. C. Henckel H0-19, w/a  
M. C. Hughes H0-14, w/o  
K. R. Fecht H0-02, w/a  
J. V. Borghese H0-19, w/a  
Document and Info Services H0-09

**CONCURRENCES**

DATE	4/1/98
INITIALS	JVB SB

057476

**ATTACHMENT**

**TECHNICAL STRATEGY FOR DISPOSITIONING ABANDONED  
OR NONLOCATABLE WELLS**

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## TECHNICAL STRATEGY FOR DISPOSITIONING ABANDONED OR NONLOCATEABLE WELLS

In FY97, a strategy was developed which tied the Hanford Site well decommissioning/remediation schedule to the long-term environmental restoration schedule. The underlying premise is that environmental restoration of an area cannot be considered complete unless a comprehensive effort is made to eliminate wells that, due to construction techniques, may provide pathways for contaminants to migrate deeper into the soil zone or to groundwater. If a well is in a location that makes it attractive for use as a monitoring well, it is considered for remediation. If a well is not required for future use, or if it is in such a condition that it cannot be remediated, it is a candidate for decommissioning. A decommissioned well is defined as a well that has been rendered unusable through a series of documented activities that meet WAC 173-160 requirements.

Within the Hanford well inventory, there are approximately 640 wells which, for various reasons, do not physically exist or cannot be located. These wells are identified as abandoned wells as opposed to decommissioned wells. This strategy has been developed to identify a process to demonstrate that a reasonable, documented procedure has been followed to disposition these wells.

Abandoned wells can be categorized as:

- **Category 1** - Documented drilled wells that are currently located under buildings or other permanent structures.
- **Category 2** - Wells that were reported to have been drilled in areas of no concern; i.e. areas where no known contaminants exist (generally >50 feet away from a facility that disposed contaminated liquids to the ground).
- **Category 3** - Wells that were reported to have been drilled in areas of concern; i.e. areas that are within 50 ft. of a facility that disposed contaminated liquids to the ground.

Under preliminary agreement with the State of Washington Department of Ecology (Ecology), the following actions have been approved for eliminating abandoned wells from the Hanford Site Well Inventory:

### Category 1

Category 1 wells may or may not have survey coordinates.

- For those wells with survey coordinates, a map showing the well(s) and the structure shall be sufficient evidence to show that the well has been overlain by the structure. A copy of the map shall be attached to the Water Well Report and submitted to Ecology.



- For those wells without survey coordinates, a literature search and/or personal interviews shall be conducted and documented to establish or attempt to establish a well(s) location and/or existence. In the event that a field search has not previously been conducted, then a reasonable effort will be made to locate the well(s). A map and any pertinent information shall be submitted with the Water Well Report to Ecology.

### **Category 2**

Category 2 wells like Category 1 wells may or may not have survey coordinates. For the purposes of these activities, Category 2 wells are >50 ft. from a facility that disposed contaminated liquids to the ground.

- For those wells with survey coordinates, in those cases where a field search/investigation has not been conducted, one will be performed. To facilitate this effort, a Trimble Navigation Limited GPS unit (Model ScoutMaster) will be utilized. The resulting search will be documented on the appropriate Field Activity Report (FAR) and transmitted with the Water Well Report to Ecology.
- For those wells without survey coordinates but have some location data, a map will be provided that depicts the general area. If a field search/investigation has not been conducted, one will be performed. The Trimble GPS unit will be utilized to facilitate field activities. The map, pertinent information, and/or appropriate FAR will be submitted to Ecology with the Water Well Report.

### **Category 3**

Category 3 wells differ from Category 2 wells only in that they are located within 50 feet of a facility that disposed contaminated liquids to the ground. Because of the reported well location(s), a more vigorous effort will be attempted before removing these wells from the current inventory.

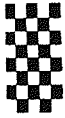
- For those wells with survey coordinates, a field search will be conducted using the Trimble Navigation System Model SSI GPS unit for a precise location. If no physical evidence exists at the location, then a 10 ft. x 10 ft. area (centered around the GPS survey point) will be scanned with a metal detector. Negative results from the scan will be documented on a field activity report and transmitted to Ecology with a Water Well Report. Positive results from the metal detection scan will require that the well be placed back into inventory and evaluated for future use or decommissioning.
- For wells without survey coordinates but have other location data available, a field search will be conducted using the Trimble Navigation System Model SSI GPS unit to attempt to accurately define the well location(s). If no physical evidence exists within the area defined by the data, then a metal scan of the area will be performed and documented on a field activity report. Negative results will be transmitted to Ecology with a Water Well Report.

Positive results from the metal detection scan will require that the well be evaluated for future use or decommissioning.

- For wells that do not have sufficient location data to initiate a field search, the information will be provided to projects involved in remedial actions and the removal of these wells from inventory will be addressed during site closeout activities.

**Attachment 7**

**Screen Length for Replacement  
RCRA Wells  
(documentation of Telecon)**



08/13/98

16:36

HANFORD PROJECT DEPT ECOLOGY

001

To: John Auten  
Well Admin. Office ERC  
FAX 509-372-9292

From: Stan Leja  
Washington State Dept. of Ecology

Date: 8/13/98

Re: Screen length for replacement RCRA wells

Per our telephone conversation of this date, I agree that in light of the fact that RCRA wells are going dry due to shallow drill depths and short screen interval that the prudent design is to increase the screen length. A minimum screen length of 30 feet should be utilized for the replacement well construction. *with the stipulation that low flow sampling techniques will be used when required by*  
*Ecology*  
*Stan Leja*  
Stan Leja

P.2/2

AUG 13 '98 03:01PM CH2M HILL HAN INC 509 372 9292

CORRESPONDENCE COVER SHEET		LTR 057476
Page 1	Date Doc: 4/1/98    Date Processed: 4/1/98	P

**TECHNICAL STRATEGY FOR DISPOSITIONING ABANDONED OR NONLOCATABLE WELLS**

From	Org	To	Org	cc	Closes
HENCKEL, GC	BHI	FURMAN, MJ	GWP		
		HENCKEL, GC	BHI	x	
		HUGHES, MC	BHI	x	
		THOMPSON, KM	GWP	x	
Area	Subject	OU	TSD	ERA	
	8400				
	8960				

ACTION TRACKING					
Owed To	Org	Due	Owed By	Org	Forecast

DISTRIBUTION			
ERC Master File	<i>R/c</i>	DOE Project File	<i>only</i>
NON-Project File	<input type="checkbox"/>	HR File	<input type="checkbox"/>

X  
SEE LETTER FOR DIST.

7 kgf      *Ull*

CCN # 062177

SUPERSEDED BY: 062605

*2 tape paperclipped  
Sections*

24 SEP 98 8:15

RECORD TYPE mm  
SUBJECT CODE 4170,8420  
OU \_\_\_\_\_  
ERA \_\_\_\_\_  
TSD \_\_\_\_\_  
SITE \_\_\_\_\_  
CLOSES \_\_\_\_\_  
ACTION TRACKING ☐

CHRONED BY llh  
REPRO BY ✓ AB 9-25-98  
DATA ENTRY BY llh  
SCANNED/PG COUNT 288x